

MONOCLONAL ANTIBODIES FOR RAPID DIAGNOSIS OF SUMMER PATCH
AND NECROTIC RING SPOT DISEASES OF TURFGRASSES

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The diagnosis of summer patch and necrotic ring spot diseases of Kentucky bluegrass, caused by Magnoportha poae and Leptoshaeria korrae, respectively, is very difficult with current techniques due to non-distinctive disease symptoms and culture characteristics. New technologies are available that allow the rapid identification of micro-organisms through the use of antibodies derived from animal serum. The impact of this new approach is already being felt in the area of turfgrass management. Antibody-based kits are in use or being developed by private companies for detection of pythium blight, brown patch and dollar spot of turfgrass.

Development of antibody-based detection kits for necrotic ring spot and summer patch by private companies in the near future will be less likely because 1) these two newly discovered disease complexes are not well understood, and 2) the two pathogens attack crowns and roots rather than foliage, making sampling and assaying more difficult.

The immediate benefit of antibody-based assay systems for summer patch and necrotic ring spot will be for investigating the characteristics of the two pathogens. A second benefit will likely be a straightforward diagnostic test suitable for use by clinics and turf managers.